

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL050318\  
 Data File : VL031980.D  
 Acq On : 4 May 2018 2:45  
 Operator : SY/AP  
 Sample : J2629-02  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SG1

Manual Integrations  
 APPROVED

MMDadoda  
 5/4/2018 5:01:16 PM

Quant Time: May 04 04:24:32 2018  
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL050318AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May 03 15:52:13 2018  
 QLast Update : Thu May 03 15:52:13 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.88  | 49   | 1125755  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.42  | 114  | 2209807  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.39 | 117  | 2222985  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.72  | 95    | 1802232  | 10.46    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 104.60% |

| Target Compounds           | R.T.  | QIon | Response | Conc  | Units  | Ovalue |
|----------------------------|-------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane | 3.16  | 85   | 18732    | 0.13  | ppbv   | 91     |
| 3) Chlorodifluoromethane   | 3.09  | 51   | 19108m   | 0.18  | ppbv   |        |
| 4) Chloromethane           | 3.26  | 50   | 22157    | 0.40  | ppbv   | 96     |
| 9) Propene                 | 3.12  | 41   | 117940   | 3.04  | ppbv   | 95     |
| 10) Heptane                | 8.38  | 43   | 14166    | 0.11  | ppbv # | 83     |
| 11) Trichlorofluoromethane | 4.11  | 101  | 41790    | 0.23  | ppbv   | 99     |
| 13) Ethanol                | 3.76  | 45   | 170466   | 11.76 | ppbv # | 100    |
| 15) Acetone                | 4.00  | 43   | 504012   | 3.17  | ppbv # | 84     |
| 19) Isopropyl Alcohol      | 4.14  | 45   | 24971m   | 0.29  | ppbv   |        |
| 20) Methylene Chloride     | 4.51  | 84   | 79150    | 1.47  | ppbv # | 92     |
| 26) Hexane                 | 5.90  | 57   | 176010   | 1.37  | ppbv # | 45     |
| 29) Chloroform             | 5.97  | 83   | 20004    | 0.10  | ppbv # | 76     |
| 34) 2-Butanone             | 5.45  | 43   | 575267   | 3.16  | ppbv   | 100    |
| 35) Carbon Tetrachloride   | 7.27  | 117  | 10897m   | 0.06  | ppbv   |        |
| 36) Benzene                | 7.13  | 78   | 92695    | 0.45  | ppbv   | 93     |
| 51) 2-Hexanone             | 10.42 | 43   | 157889   | 1.01  | ppbv # | 96     |
| 52) Tetrachloroethene      | 11.53 | 164  | 5749m    | 0.07  | ppbv   |        |
| 53) Toluene                | 10.09 | 91   | 133255   | 0.59  | ppbv   | 98     |
| 58) Ethyl Benzene          | 13.02 | 91   | 47734m   | 0.15  | ppbv   |        |
| 59) m/p-Xylene             | 13.26 | 91   | 156147m  | 0.58  | ppbv   |        |
| 60) o-Xylene               | 14.00 | 91   | 60526m   | 0.22  | ppbv   |        |
| 72) 4-Ethyltoluene         | 16.14 | 105  | 35255    | 0.13  | ppbv # | 89     |
| 73) 1,3,5-Trimethylbenzene | 16.31 | 105  | 43493m   | 0.17  | ppbv   |        |
| 74) 1,2,4-Trimethylbenzene | 17.07 | 105  | 126547   | 0.45  | ppbv # | 71     |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

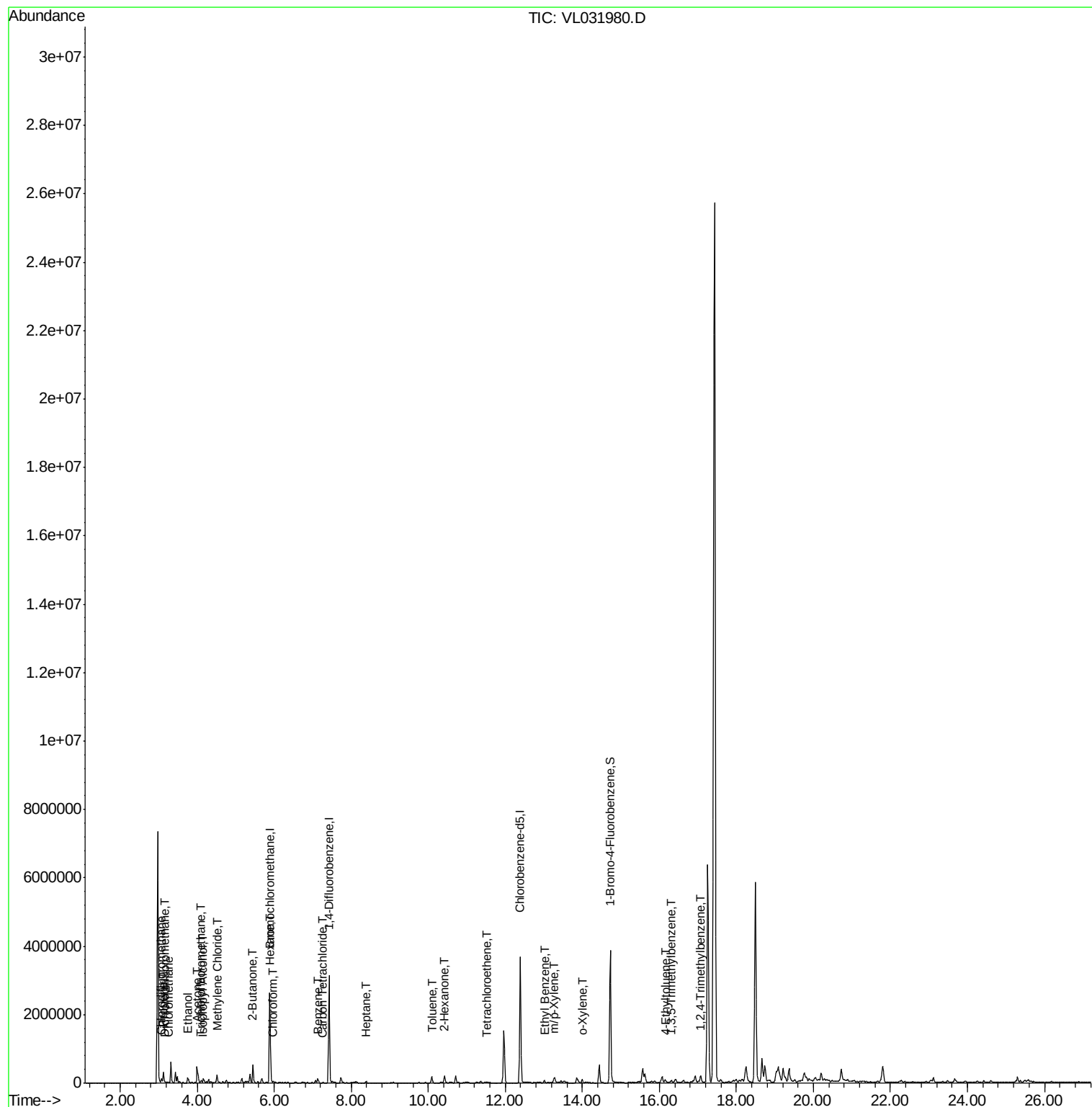
Data Path : W:\HPCHEM1\MSVOA L\DATA\VL050318\  
Data File : VL031980.D  
Acq On : 4 May 2018 2:45  
Operator : SY/AP  
Sample : J2629-02  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

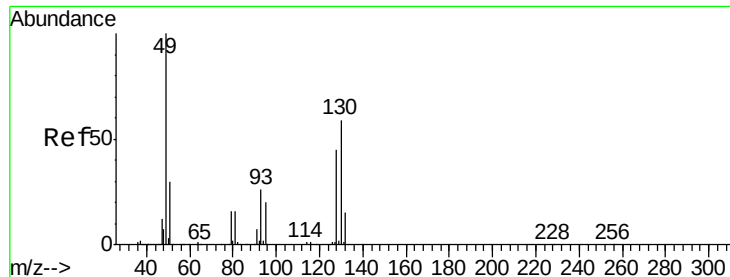
Instrument :  
MSVOA\_L  
ClientSampleId :  
SG1

Manual Integrations  
APPROVED

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5/4/2018 5:01:16 PM

Quant Time: May 04 04:24:32 2018  
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL050318AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May  
QLast Update : Thu May 03 15:52:13 2018  
Response via : Initial Calibration





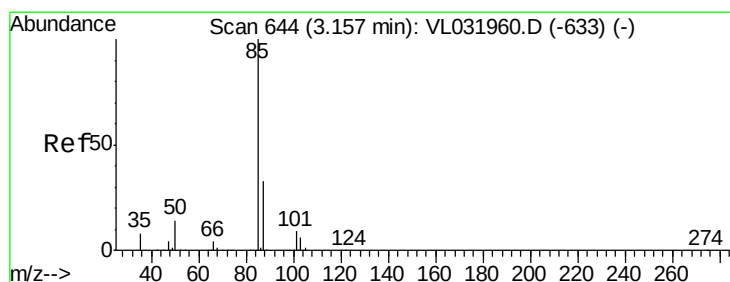
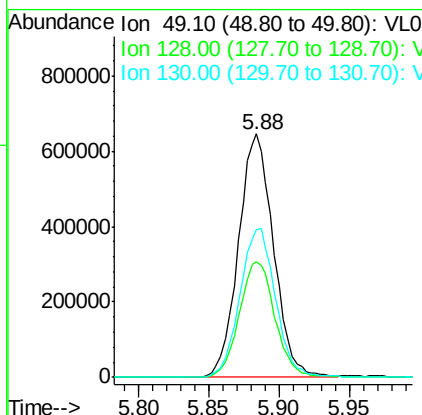
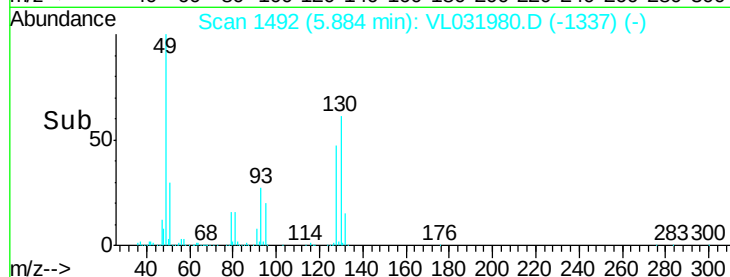
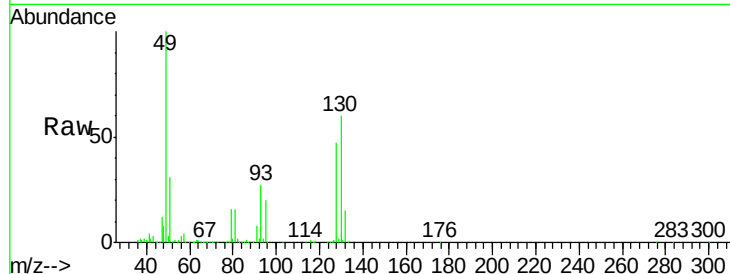
#1  
 Bromochloromethane  
 Concen: 10.00 ppbv  
 RT: 5.88 min Scan# 1492  
 Delta R.T. -0.00 min  
 Lab File: VL031980.D  
 Acq: 4 May 2018 2:45

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 SG1

|          |       |       |         |
|----------|-------|-------|---------|
| Tot Ion: | 49    | Resp: | 1125755 |
| Ion      | Ratio | Lower | Upper   |
| 49       | 100   |       |         |
| 128      | 48.5  | 24.1  | 72.3    |
| 130      | 62.2  | 30.7  | 92.1    |

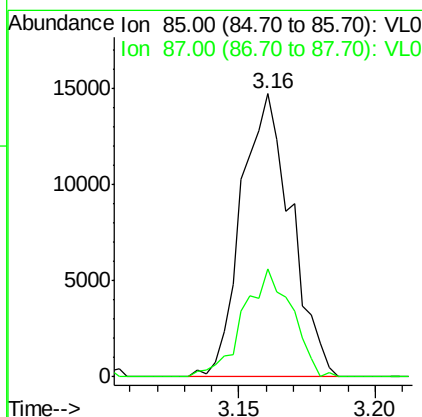
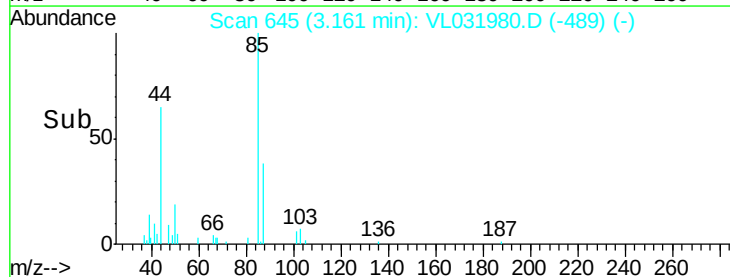
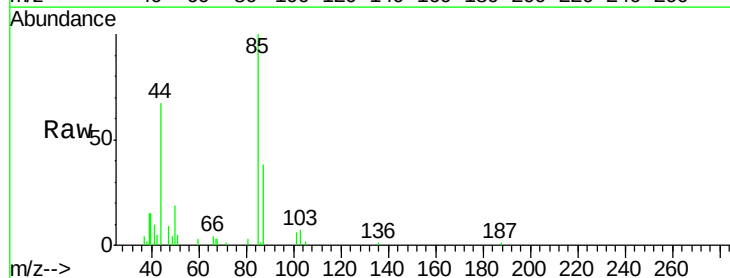
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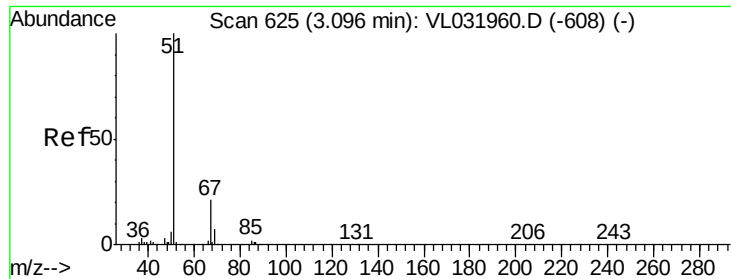
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#2  
 Dichlorodifluoromethane  
 Concen: 0.13 ppbv  
 RT: 3.16 min Scan# 645  
 Delta R.T. 0.00 min  
 Lab File: VL031980.D  
 Acq: 4 May 2018 2:45

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 85    | Resp: | 18732 |
| Ion      | Ratio | Lower | Upper |
| 85       | 100   |       |       |
| 87       | 38.4  | 26.8  | 40.2  |





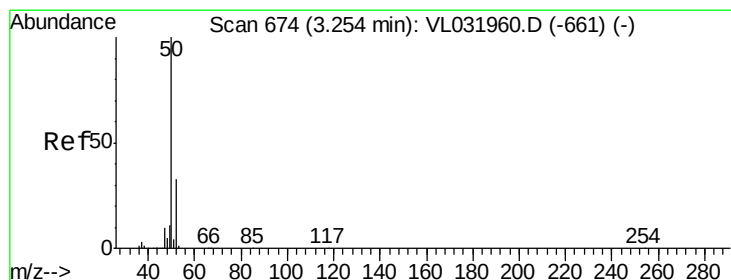
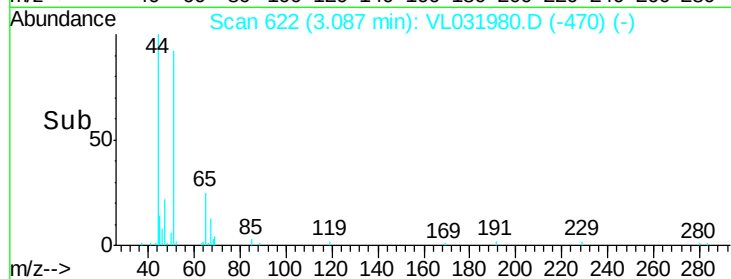
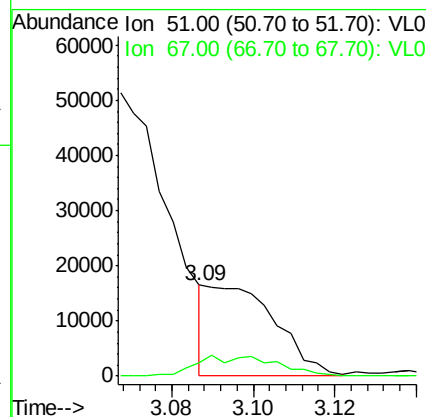
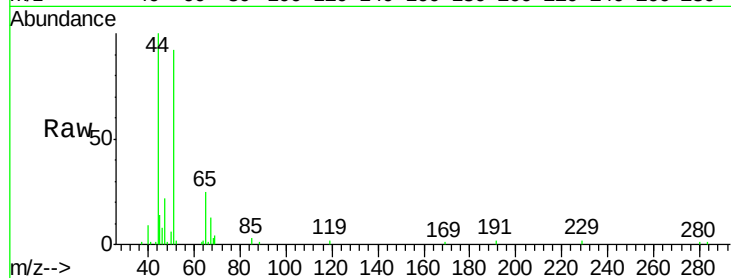
#3  
Chlorodifluoromethane  
Concen: 0.18 ppbv m  
RT: 3.09 min Scan# 622  
Delta R.T. -0.01 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 51      | 100   |       |       |
| 67      | 26.1  | 15.9  | 23.9# |

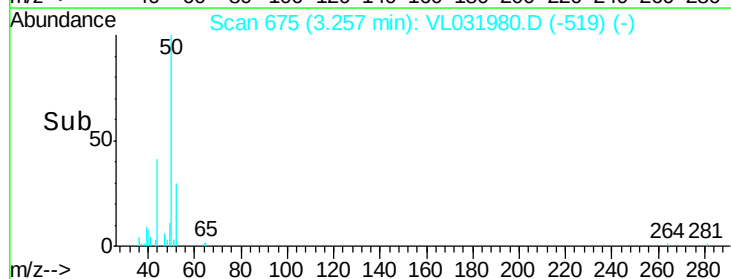
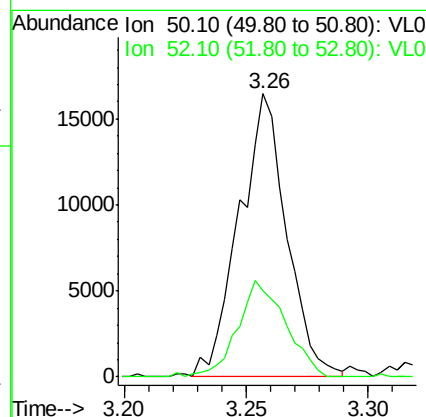
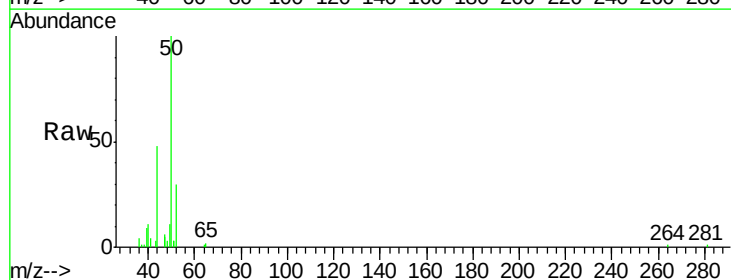
Manual Integrations  
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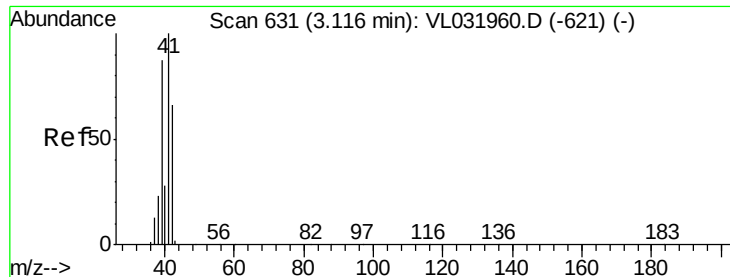
MMDadoda  
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#4  
Chloromethane  
Concen: 0.40 ppbv  
RT: 3.26 min Scan# 675  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 50      | 100   |       |       |
| 52      | 31.0  | 26.6  | 39.8  |





#9

Propene

Concen: 3.04 ppbv

RT: 3.12 min Scan# 633

Delta R.T. 0.01 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

Instrument :

MSVOA\_L

ClientSampleId :

SG1

Tot Ion: 41 Resp: 117940

Ion Ratio Lower Upper

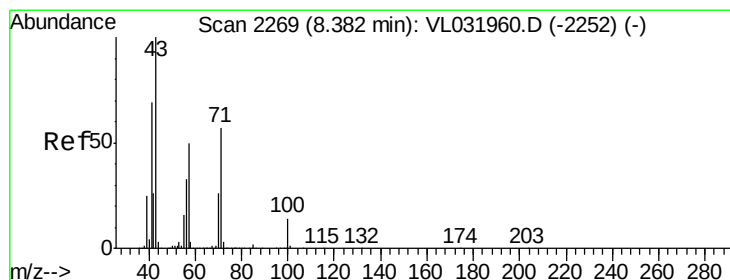
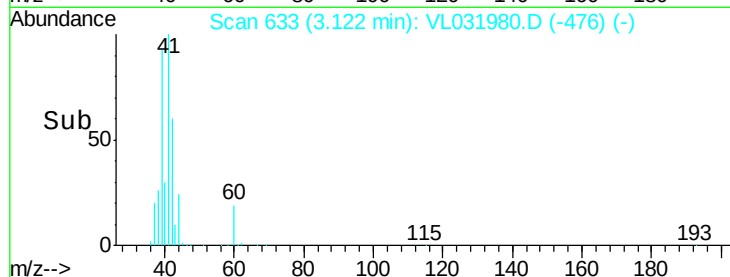
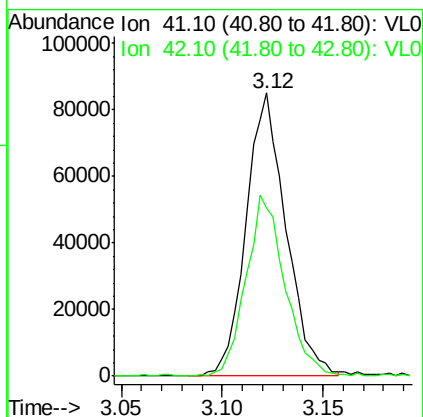
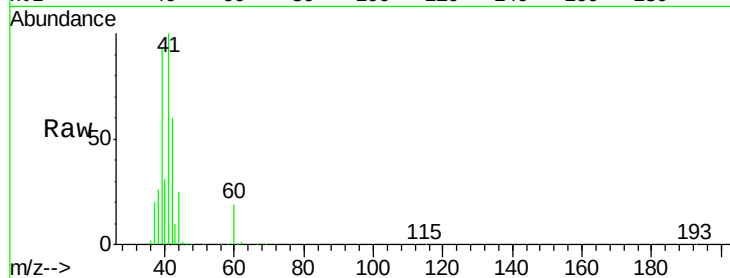
41 100

42 63.2 53.9 80.9

Manual Integrations  
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5/4/2018 5:01:16 PM



#10

Heptane

Concen: 0.11 ppbv

RT: 8.38 min Scan# 2269

Delta R.T. -0.00 min

Lab File: VL031980.D

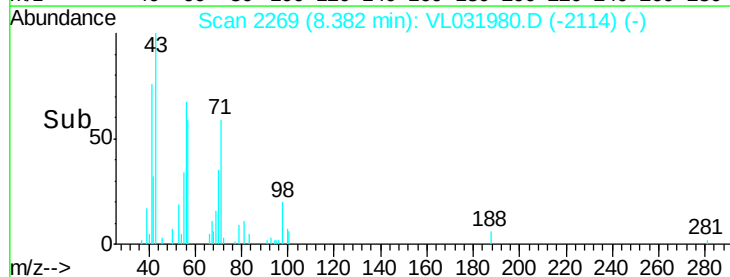
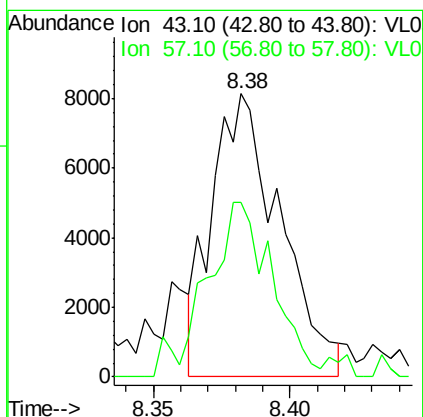
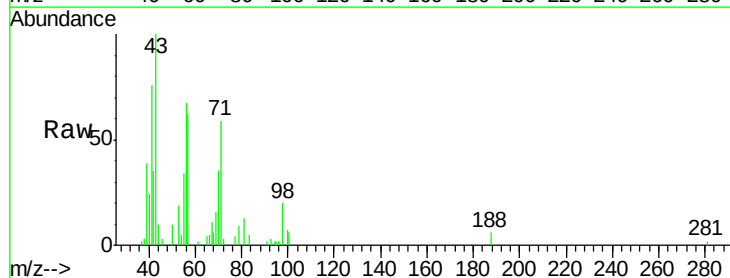
Acq: 4 May 2018 2:45

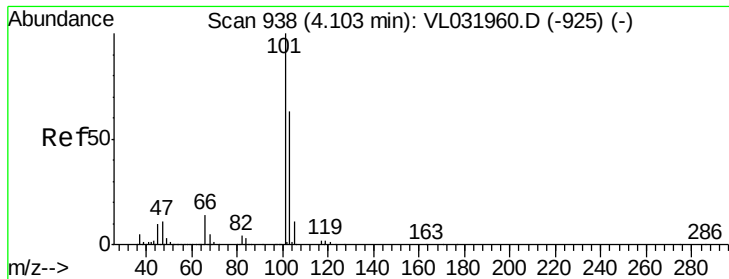
Tgt Ion: 43 Resp: 14166

Ion Ratio Lower Upper

43 100

57 62.5 40.7 61.1#





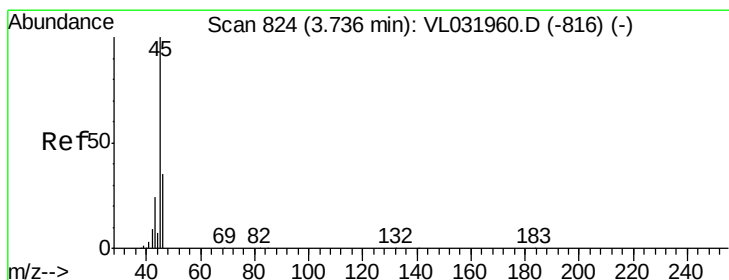
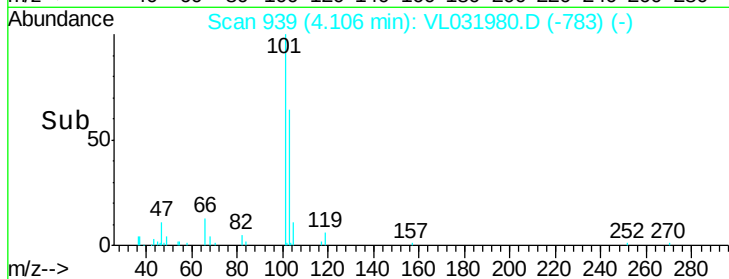
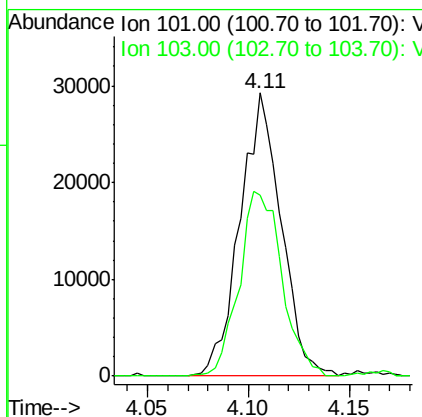
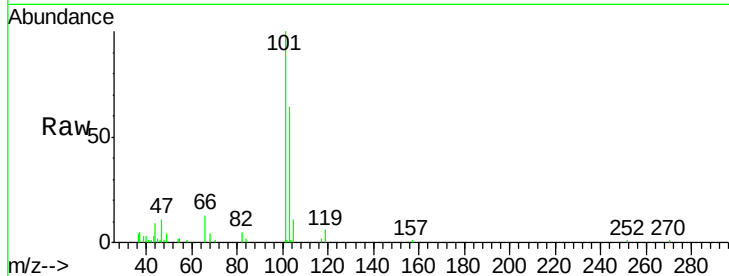
#11  
Trichlorofluoromethane  
Concen: 0.23 ppbv  
RT: 4.11 min Scan# 939  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
SG1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 101     | 100   |       |       |
| 103     | 64.0  | 50.7  | 76.1  |

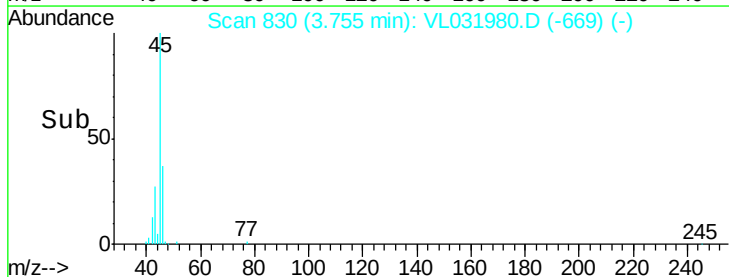
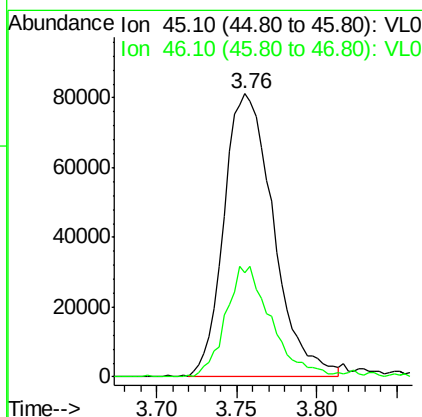
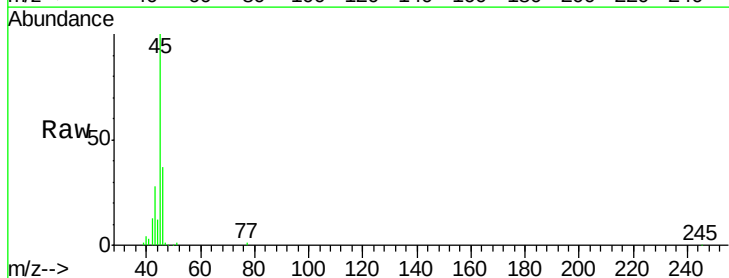
Manual Integrations  
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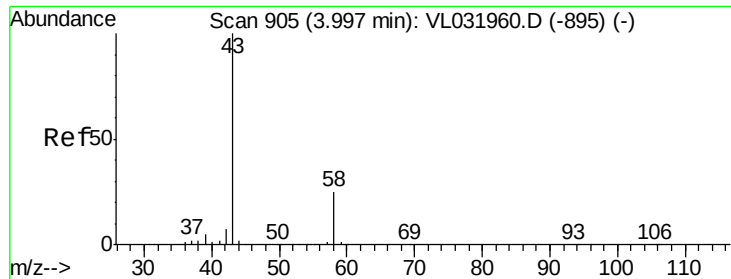
MMDadoda  
5/4/2018 5:01:16 PM



#13  
Ethanol  
Concen: 11.76 ppbv  
RT: 3.76 min Scan# 830  
Delta R.T. 0.02 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 45      | 100   |       |       |
| 46      | 36.8  | 0.0   | 0.0#  |





#15

Acetone

Concen: 3.17 ppbv

RT: 4.00 min Scan# 905

Delta R.T. -0.00 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

Instrument :

MSVOA\_L

ClientSampleId :

SG1

Tot Ion: 43 Resp: 504012

Ion Ratio Lower Upper

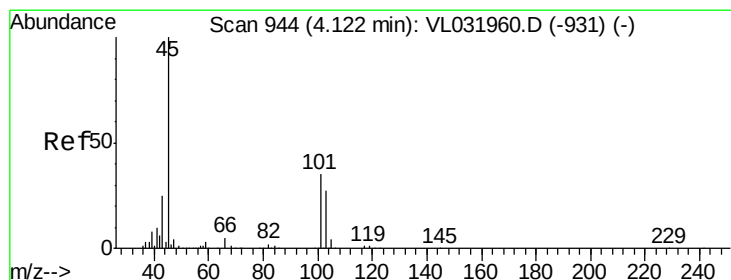
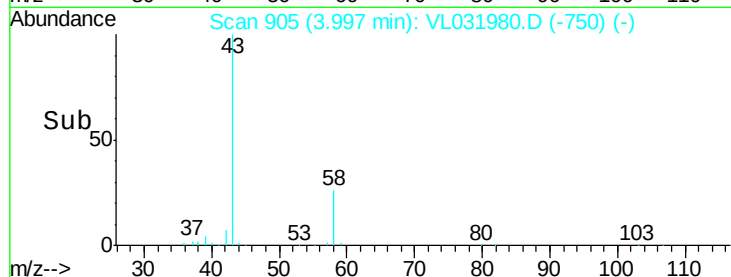
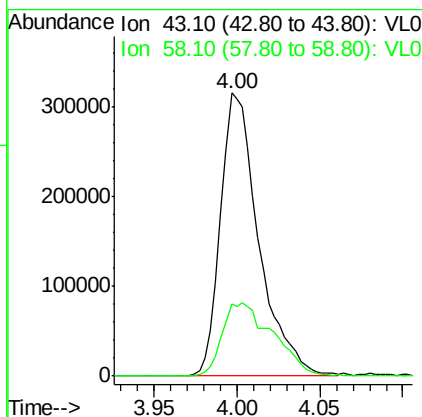
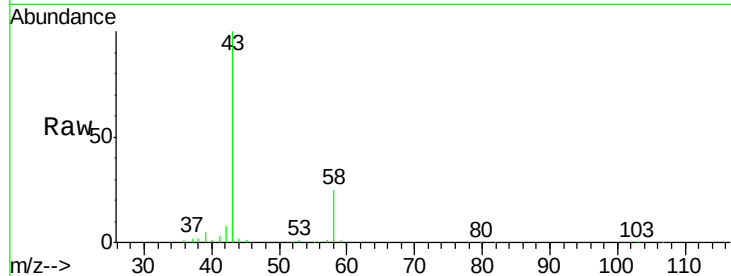
43 100

58 34.7 21.1 31.7#

Manual Integrations  
APPROVED

MMDadoda

5/4/2018 5:01:16 PM



#19

Isopropyl Alcohol

Concen: 0.29 ppbv m

RT: 4.14 min Scan# 949

Delta R.T. 0.02 min

Lab File: VL031980.D

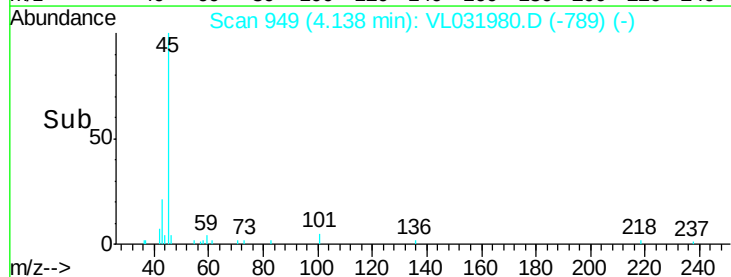
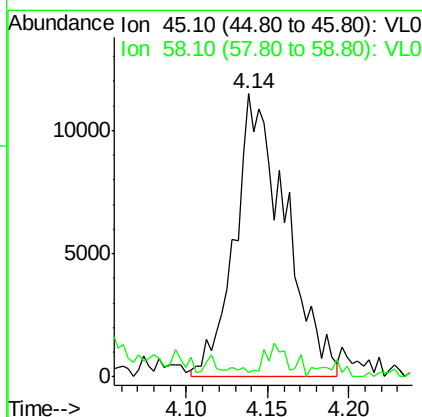
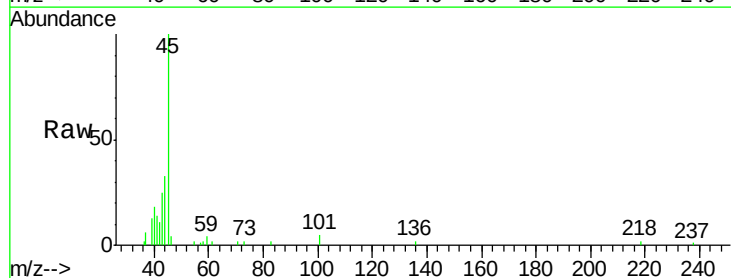
Acq: 4 May 2018 2:45

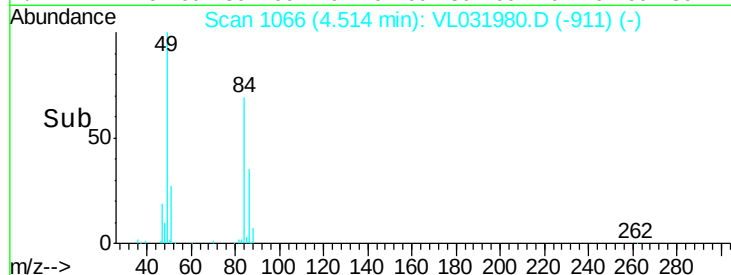
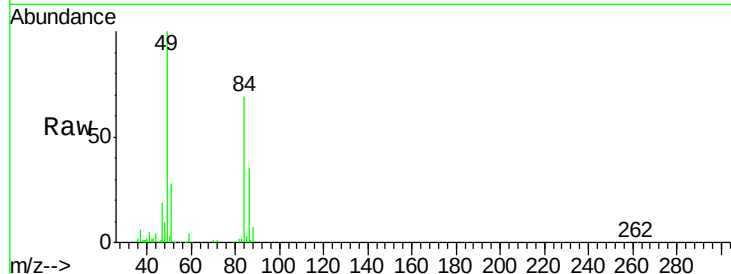
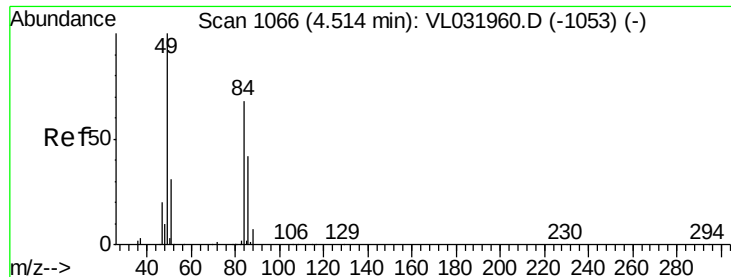
Tgt Ion: 45 Resp: 24971

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#





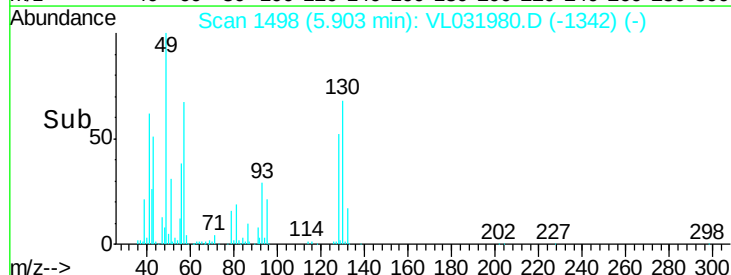
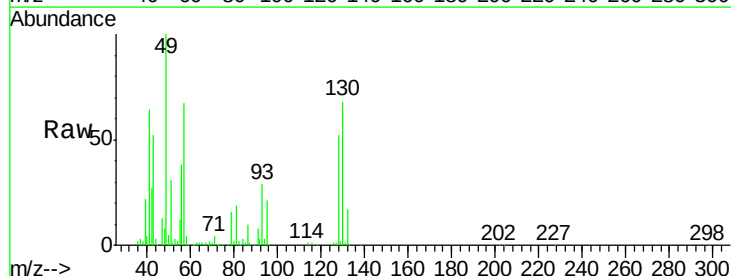
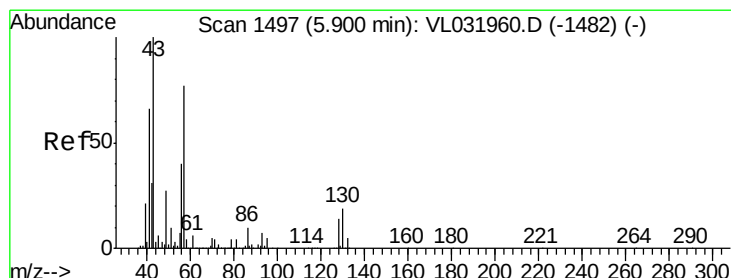
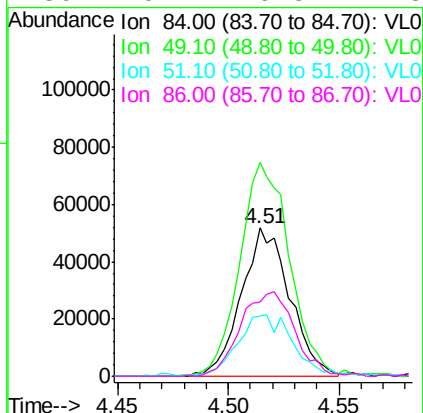
#20  
Methvlene Chloride  
Concen: 1.47 ppbv  
RT: 4.51 min Scan# 1066  
Delta R.T. -0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tot Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 84      | 84  | 100   |       |       |
| 49      | 49  | 143.9 | 118.6 | 178.0 |
| 51      | 51  | 39.7  | 36.6  | 54.8  |
| 86      | 86  | 49.2  | 49.8  | 74.8  |

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

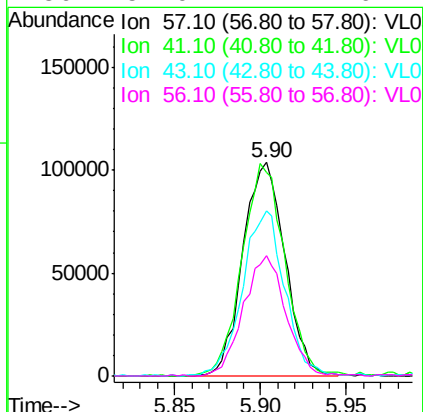
Manual Integrations  
APPROVED

MMDadoda  
5/4/2018 5:01:16 PM

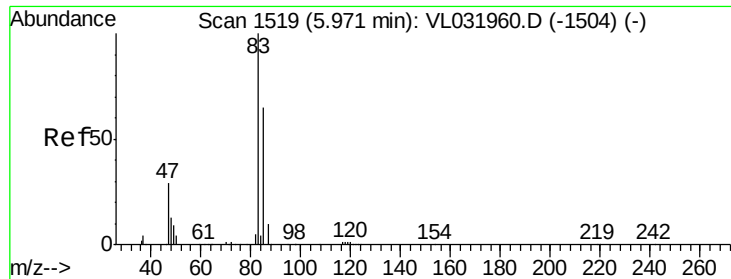


#26  
Hexane  
Concen: 1.37 ppbv  
RT: 5.90 min Scan# 1498  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 57      | 57  | 100   |       |       |
| 41      | 41  | 100.3 | 71.8  | 107.6 |
| 43      | 43  | 79.1  | 171.5 | 257.3 |
| 56      | 56  | 57.0  | 41.4  | 62.2  |







#29

Chloroform

Concen: 0.10 ppbv

RT: 5.97 min Scan# 1520

Delta R.T. 0.00 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

Instrument :

MSVOA\_L

ClientSampled :

SG1

Tot Ion: 83 Resp: 20004

Ion Ratio Lower Upper

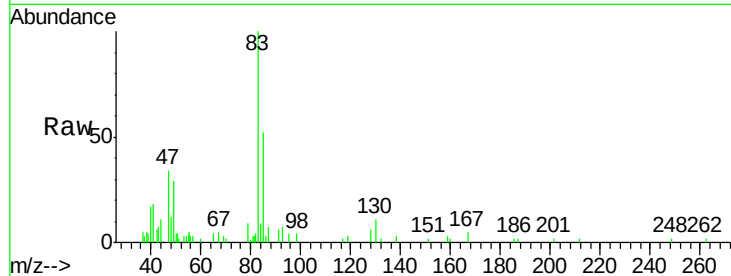
83 100

85 46.0 52.2 78.2#

Manual Integrations  
APPROVED

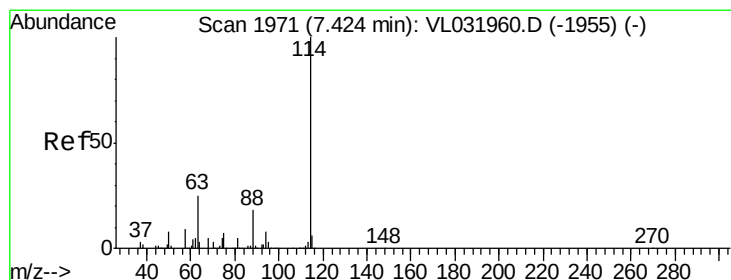
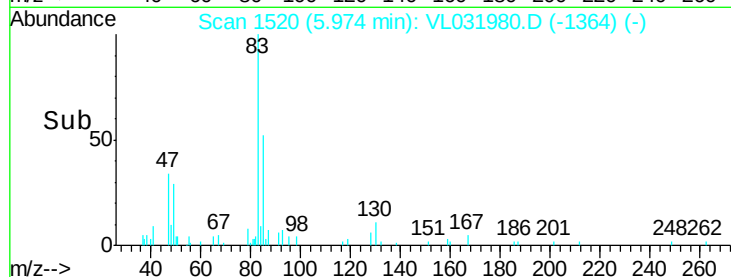
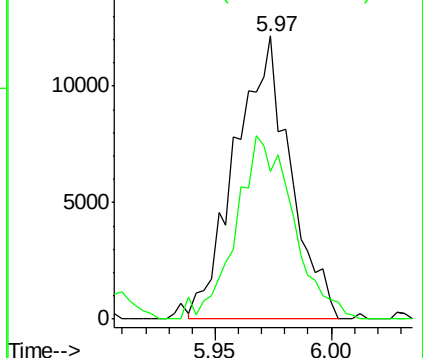
MMDadoda

5/4/2018 5:01:16 PM



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.42 min Scan# 1971

Delta R.T. -0.00 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

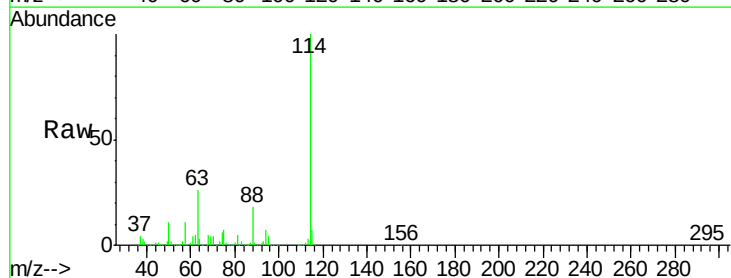
Tgt Ion: 114 Resp: 2209807

Ion Ratio Lower Upper

114 100

63 26.4 20.8 31.2

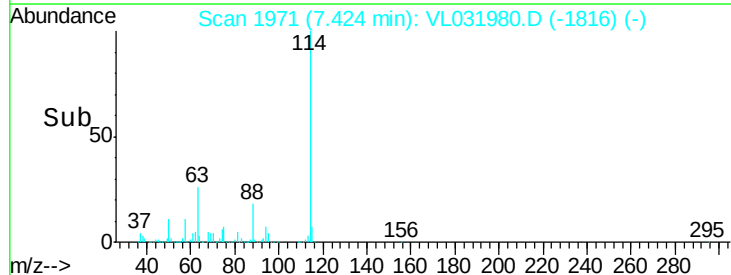
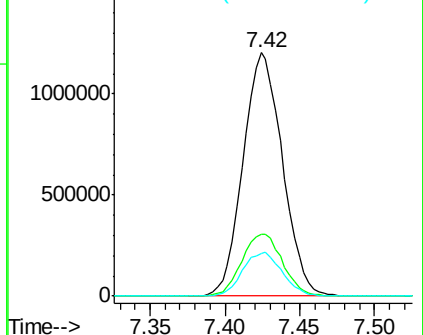
88 18.2 14.6 21.8

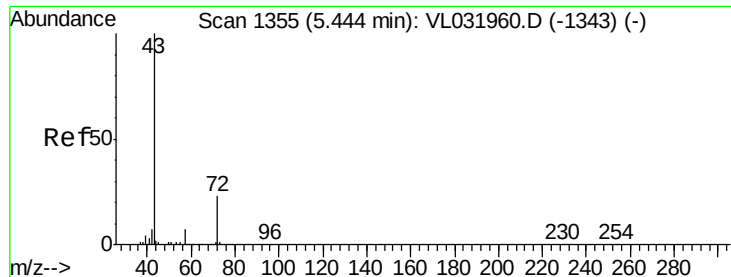


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





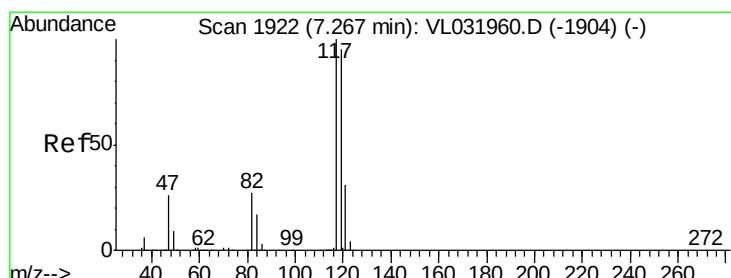
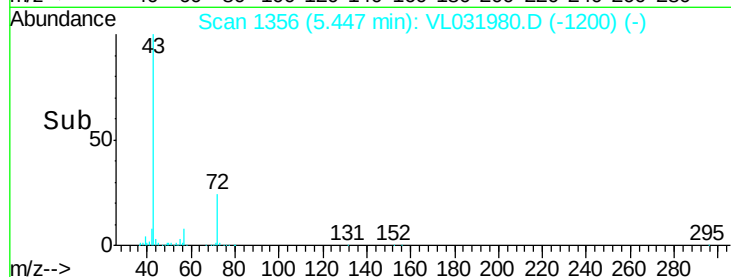
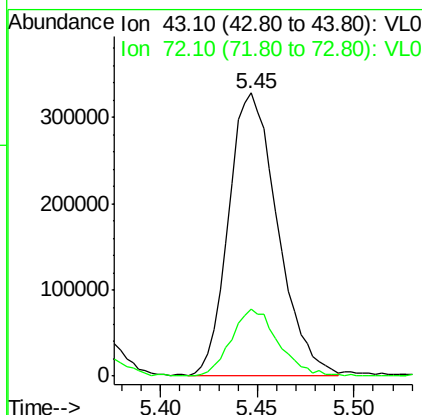
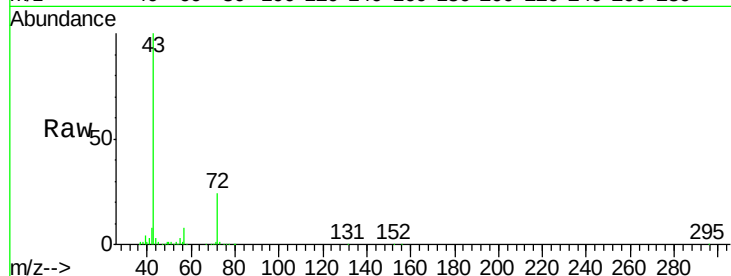
#34  
2-Butanone  
Concen: 3.16 ppbv  
RT: 5.45 min Scan# 1356  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

| Tot Ion   | 43    | Resp  | 575267 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 43        | 100   |       |        |
| 72        | 22.9  | 18.3  | 27.5   |

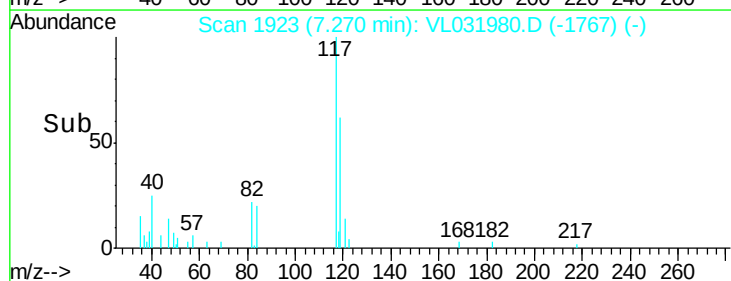
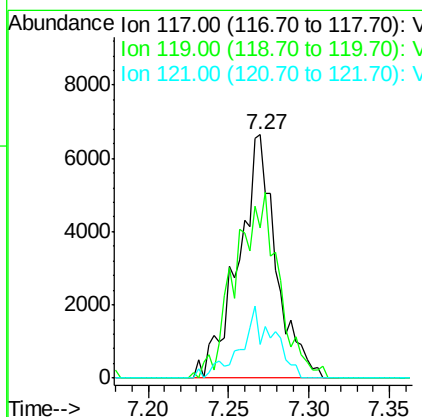
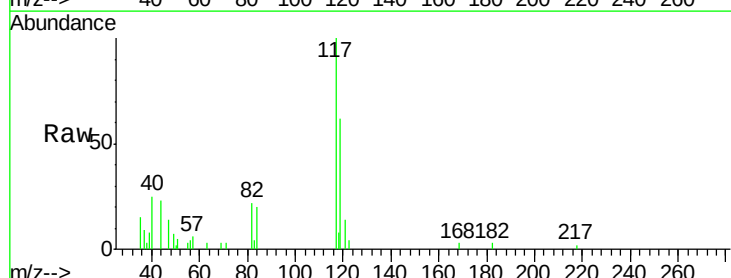
Manual Integrations  
APPROVED

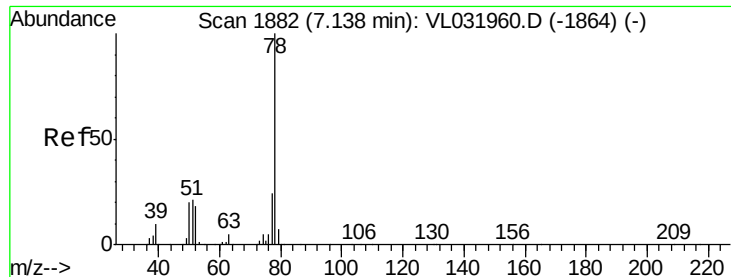
MMDadoda  
5/4/2018 5:01:16 PM



#35  
Carbon Tetrachloride  
Concen: 0.06 ppbv m  
RT: 7.27 min Scan# 1923  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion   | 117   | Resp  | 10897  |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 117       | 100   |       |        |
| 119       | 61.6  | 76.4  | 114.6# |
| 121       | 13.7  | 24.4  | 36.6#  |





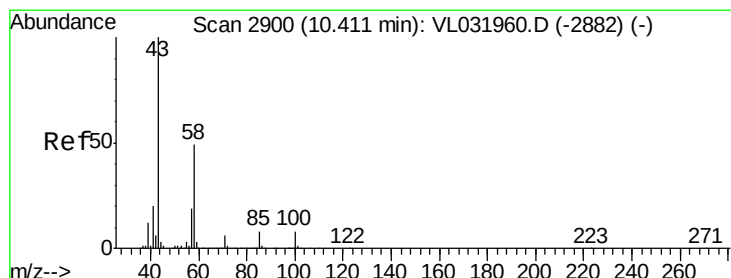
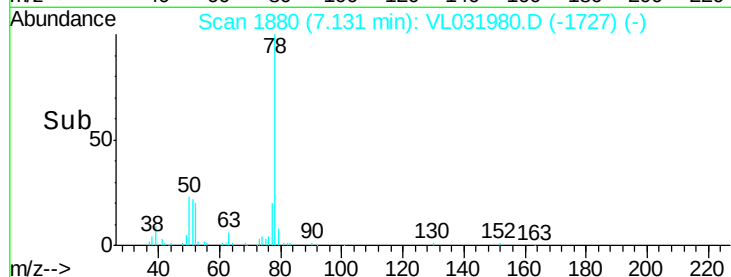
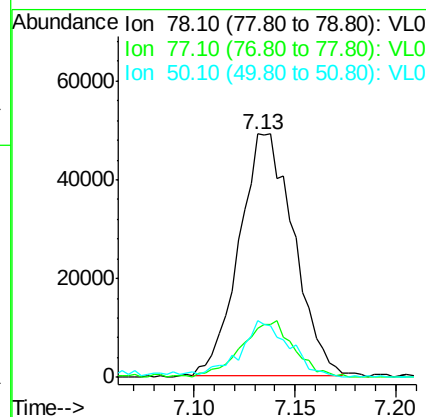
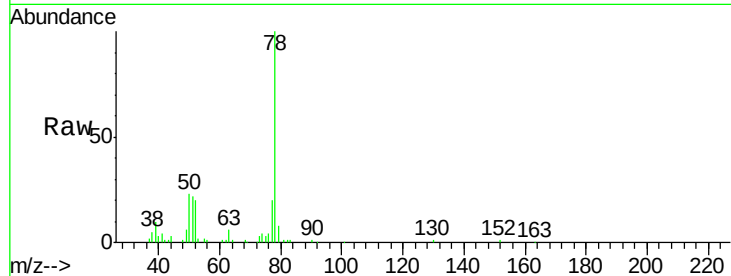
#36  
Benzene  
Concen: 0.45 ppbv  
RT: 7.13 min Scan# 1880  
Delta R.T. -0.01 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 20.2  | 19.2  | 28.8  |
| 50      | 23.4  | 16.2  | 24.4  |

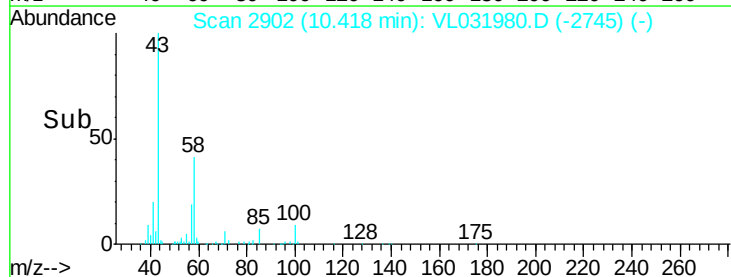
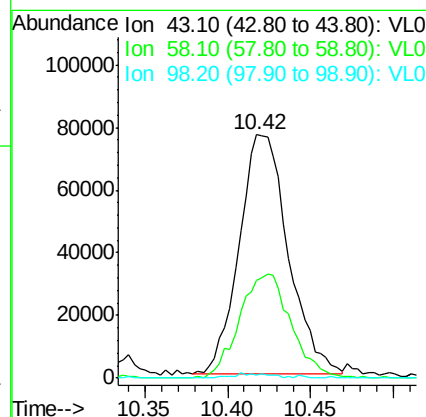
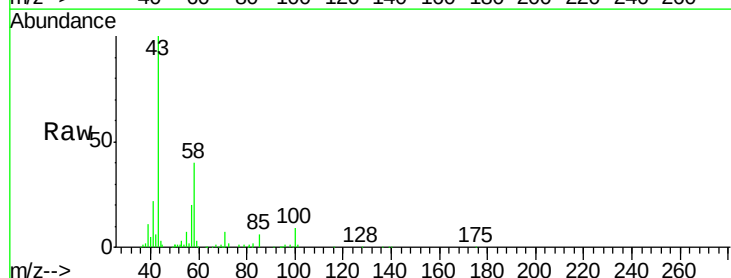
Manual Integrations  
APPROVED

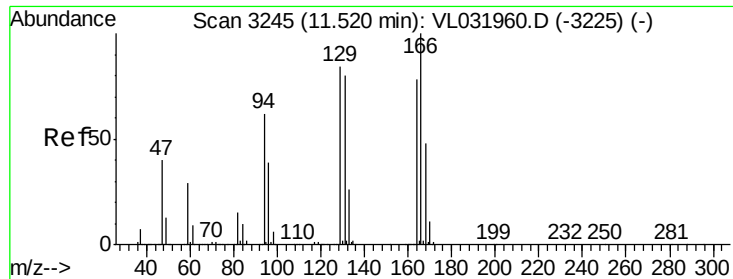
MMDadoda  
5/4/2018 5:01:16 PM



#51  
2-Hexanone  
Concen: 1.01 ppbv  
RT: 10.42 min Scan# 2902  
Delta R.T. 0.01 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 45.9  | 38.6  | 58.0  |
| 98      | 1.9   | 0.2   | 0.2#  |





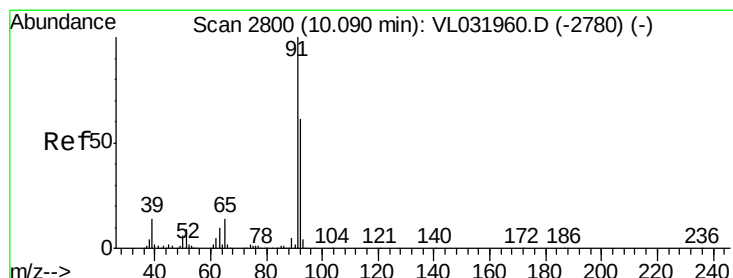
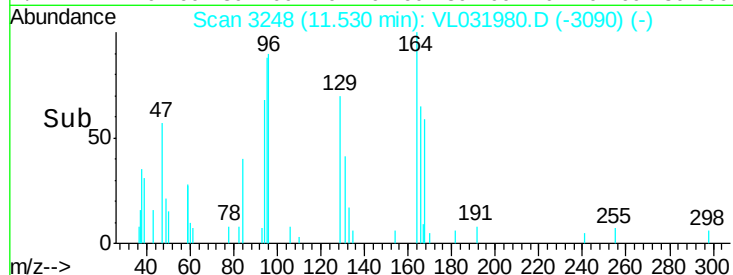
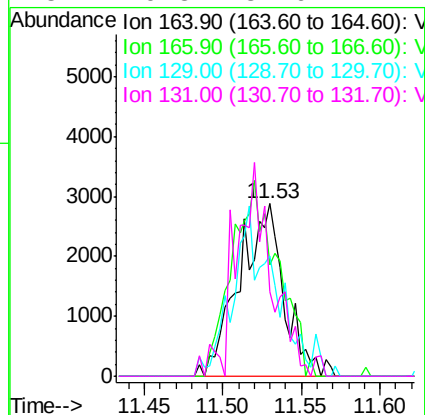
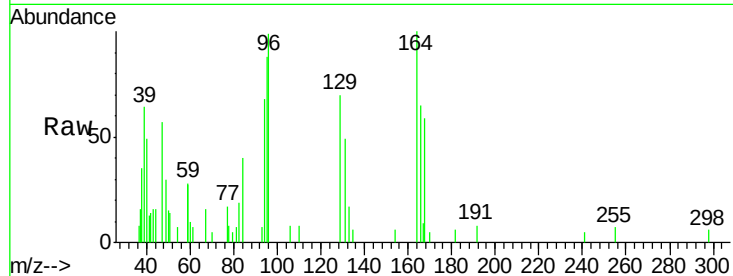
#52  
Tetrachloroethene  
Concen: 0.07 ppbv m  
RT: 11.53 min Scan# 3248  
Delta R.T. 0.01 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 164     | 100   |       |        |
| 166     | 64.7  | 101.9 | 152.9# |
| 129     | 70.2  | 85.8  | 128.6# |
| 131     | 49.3  | 81.6  | 122.4# |

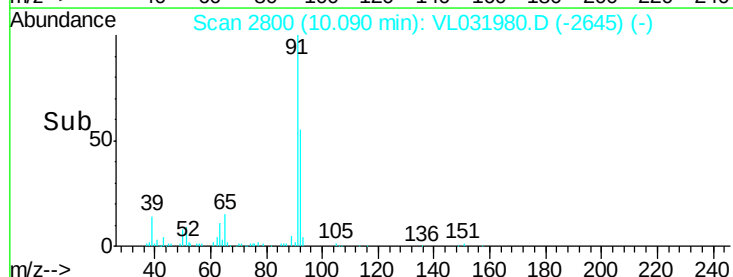
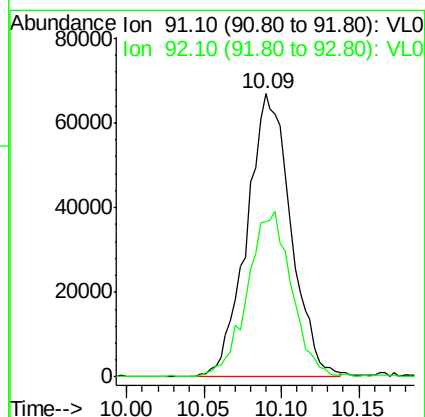
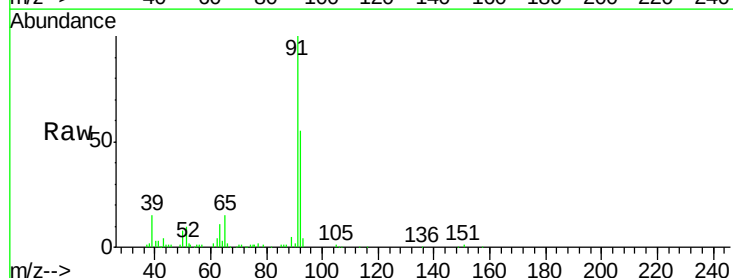
Manual Integrations  
APPROVED

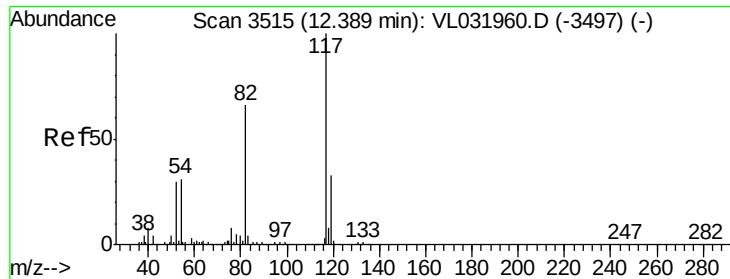
MMDadoda  
5/4/2018 5:01:16 PM



#53  
Toluene  
Concen: 0.59 ppbv  
RT: 10.09 min Scan# 2800  
Delta R.T. -0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 57.9  | 47.4  | 71.2  |





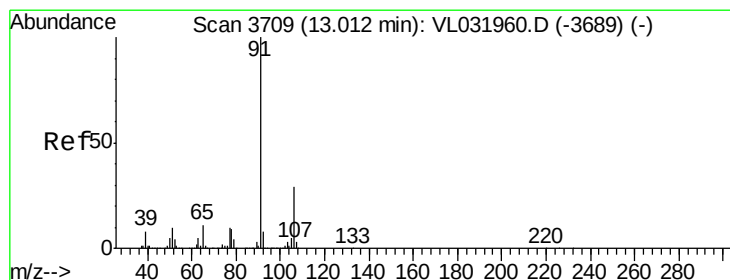
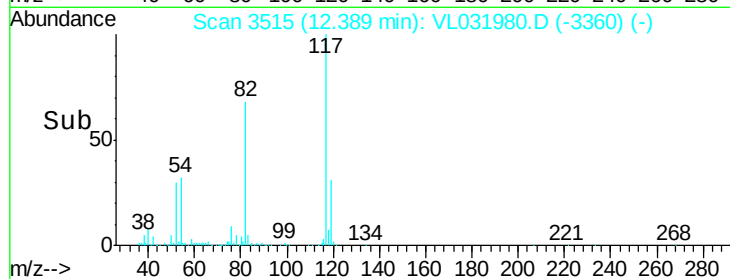
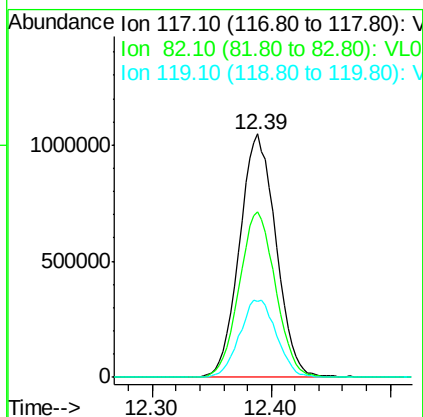
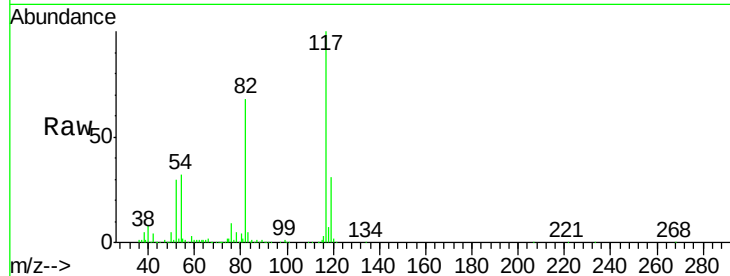
#55  
Chlorobenzene-d5  
Concen: 10.00 ppbv  
RT: 12.39 min Scan# 3515  
Delta R.T. -0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 68.0  | 51.6  | 77.4  |
| 119     | 32.3  | 44.2  | 66.4# |

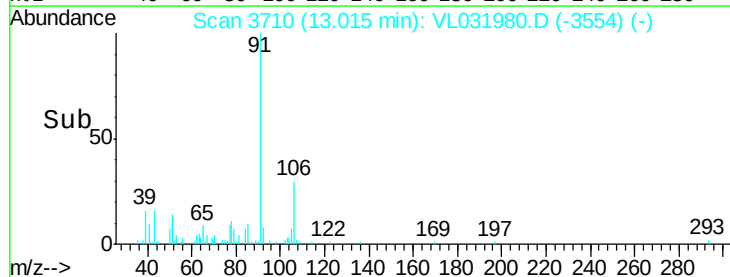
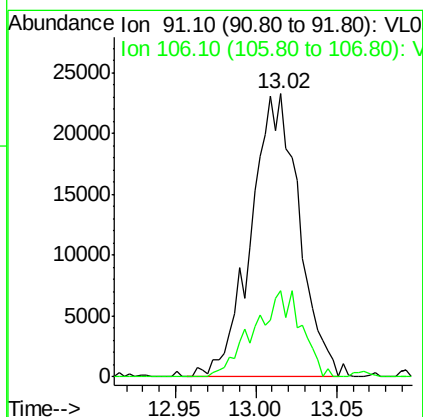
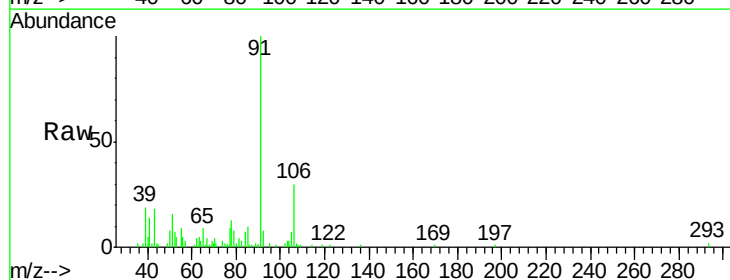
Manual Integrations  
APPROVED

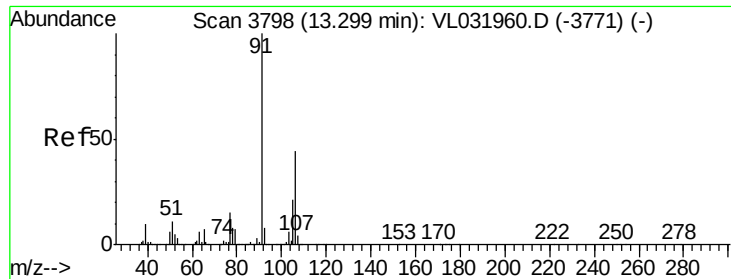
MMDadoda  
5/4/2018 5:01:16 PM



#58  
Ethyl Benzene  
Concen: 0.15 ppbv m  
RT: 13.02 min Scan# 3710  
Delta R.T. 0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 30.3  | 23.4  | 35.2  |





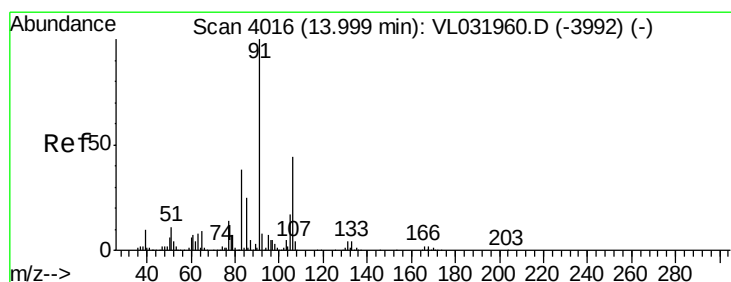
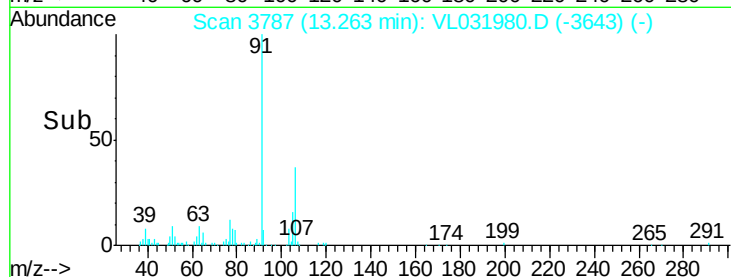
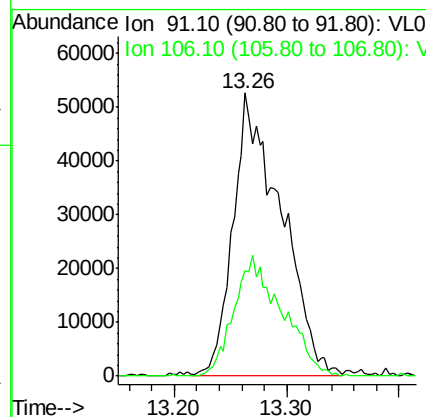
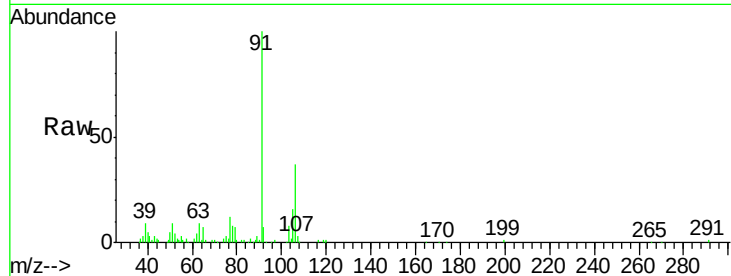
#59  
m/p-Xylene  
Concen: 0.58 ppbv m  
RT: 13.26 min Scan# 3787  
Delta R.T. -0.04 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Instrument :  
MSVOA\_L  
ClientSampled :  
SG1

Tot Ion: 91 Resp: 156147  
Ion Ratio Lower Upper  
91 100  
106 0.0 35.9 53.9#

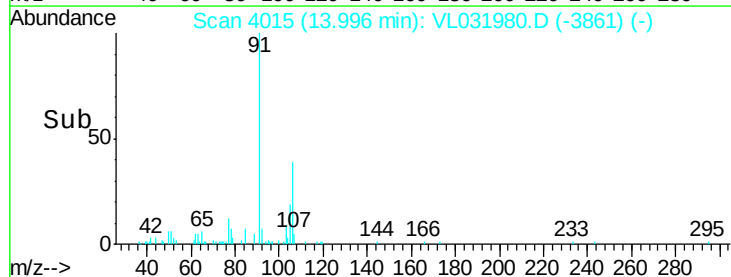
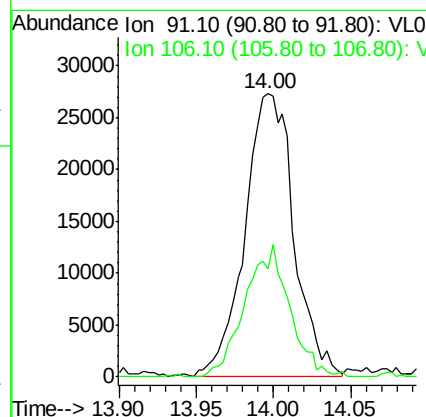
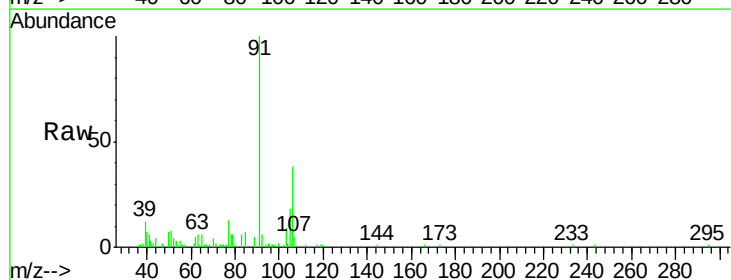
Manual Integrations  
APPROVED

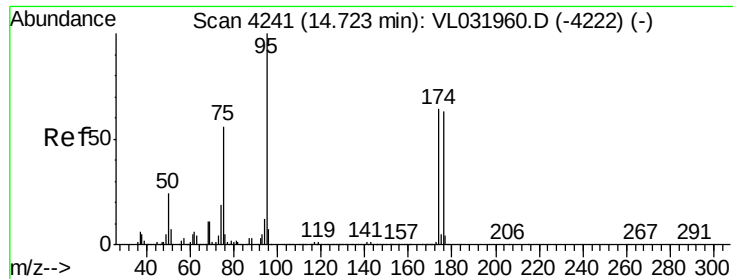
MMDadoda  
5/4/2018 5:01:16 PM



#60  
o-Xylene  
Concen: 0.22 ppbv m  
RT: 14.00 min Scan# 4015  
Delta R.T. -0.00 min  
Lab File: VL031980.D  
Acq: 4 May 2018 2:45

Tgt Ion: 91 Resp: 60526  
Ion Ratio Lower Upper  
91 100  
106 42.2 21.5 64.5





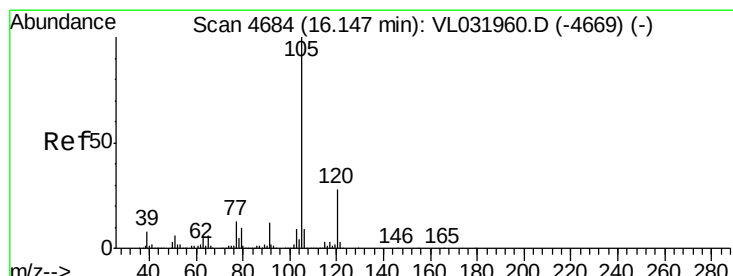
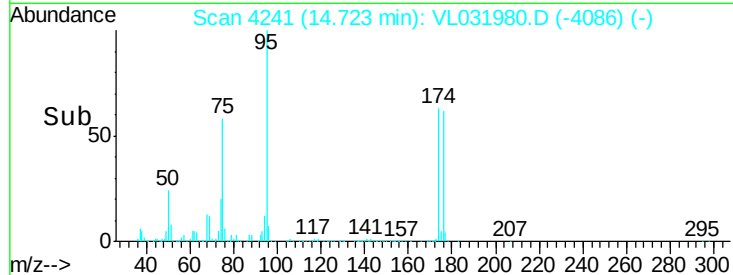
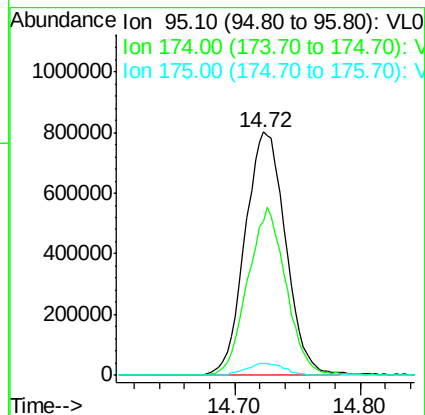
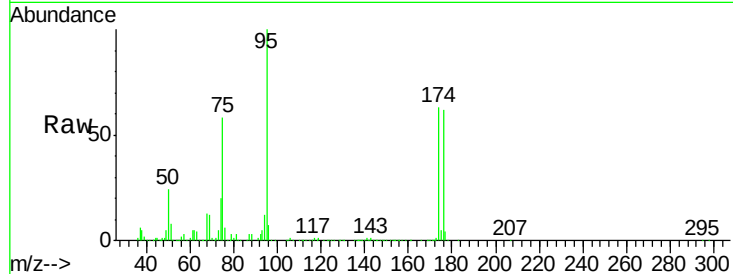
#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.46 ppbv  
 RT: 14.72 min Scan# 4241  
 Delta R.T. -0.00 min  
 Lab File: VL031980.D  
 Acq: 4 May 2018 2:45

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 SG1

Tot Ion: 95 Resp: 1802232  
 Ion Ratio Lower Upper  
 95 100  
 174 65.5 53.0 79.6  
 175 4.8 3.9 5.9

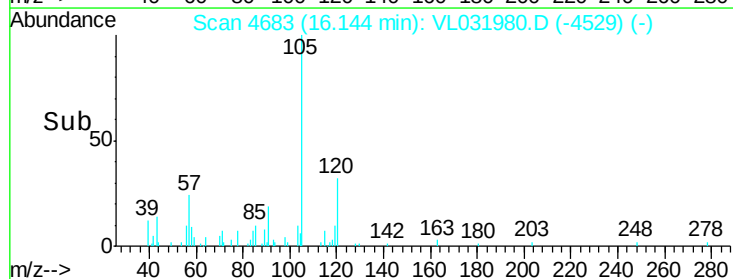
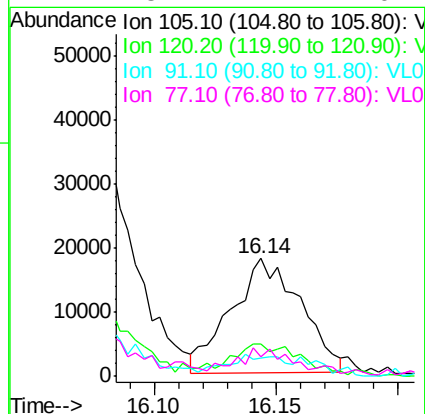
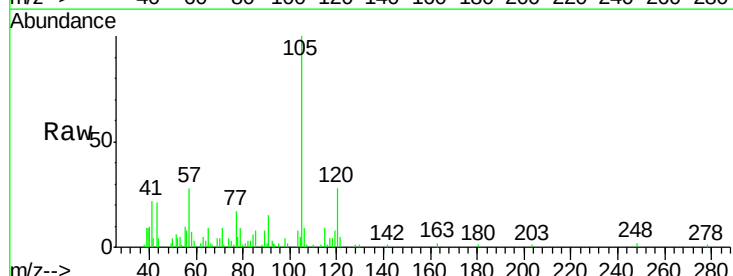
Manual Integrations  
 APPROVED

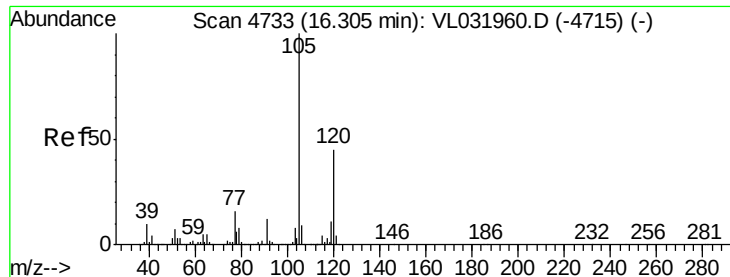
MMDadoda  
 5/4/2018 5:01:16 PM



#72  
 4-Ethyltoluene  
 Concen: 0.13 ppbv  
 RT: 16.14 min Scan# 4683  
 Delta R.T. -0.00 min  
 Lab File: VL031980.D  
 Acq: 4 May 2018 2:45

Tgt Ion: 105 Resp: 35255  
 Ion Ratio Lower Upper  
 105 100  
 120 32.3 22.6 33.8  
 91 21.3 10.5 15.7#  
 77 18.1 11.1 16.7#





#73

1,3,5-Trimethylbenzene

Concen: 0.17 ppbv m

RT: 16.31 min Scan# 4734

Delta R.T. 0.00 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

Instrument :

MSVOA\_L

ClientSampled :

SG1

Tot Ion:105 Resp: 43493

Ion Ratio Lower Upper

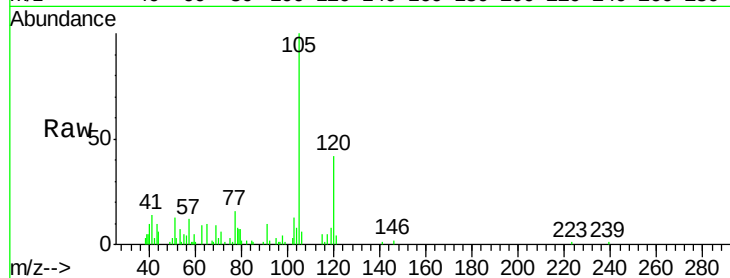
105 100

120 41.8 36.0 54.0

Manual Integrations  
APPROVED

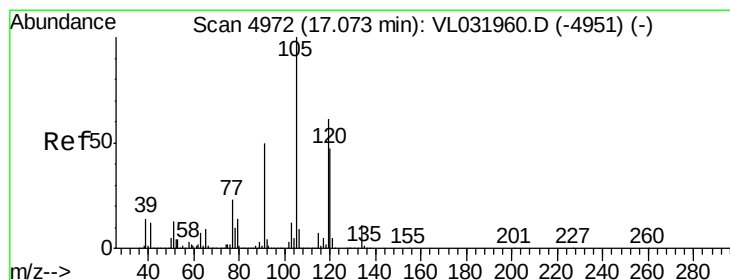
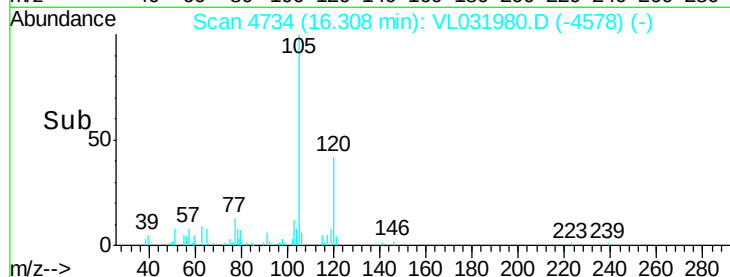
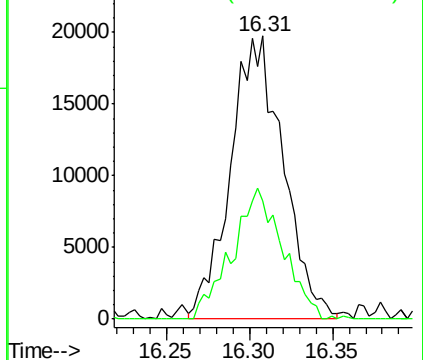
MMDadoda

5/4/2018 5:01:16 PM



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.45 ppbv

RT: 17.07 min Scan# 4970

Delta R.T. -0.01 min

Lab File: VL031980.D

Acq: 4 May 2018 2:45

Tgt Ion:105 Resp: 126547

Ion Ratio Lower Upper

105 100

120 40.5 37.8 56.6

91 12.0 40.5 60.7#

77 17.5 18.2 27.2#

Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

